UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,248	01/11/2002	Karine Ragil	PET-1710 C1	6990

23599 7590 07/08/2005

MILLEN, WHITE, ZELANO & BRANIGAN, P.C.
2200 CLARENDON BLVD.
SUITE 1400
ARLINGTON, VA 22201

EXAMINER	
NGUYEN, TAM M	
ART UNIT	**PAPER NUMBER**
1764	

DATE MAILED: 07/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/042,248	RAGIL ET AL.	
	Examiner	Art Unit	
	Tam M. Nguyen	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/15/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

15

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed on March 15, 2002 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. A copy of references A22 and A23 are missing from the filed. Therefore, the reference has not been considered.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 6-37 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 6,338,791. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims draw to a hydroisomerization process comprising adsorption steps. The present claimed set (e.g., claim 6) does not disclose a second hydroisomerization zone. However, the

present claimed set does not include a second hydroisomerization. Therefore, the U.S. Patent claimed set embraced the present claimed set.

Claims 6-37 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 17-38 of U.S. Patent No. 6,809,228. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims draw to a hydroisomerization process comprising adsorption steps. The present claimed set does not claim the use of at least one zeolite adsorbent with at least two types channels. However, the present claimed set does not exclude the use of at least one zeolite adsorbent with at least two types channels.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 6-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stem et al. (4,982,048)

Stem discloses an isomerization to produce components for gasoline pool. The process comprises passing a hydrocarbon feed comprising C_{6+} including C_7 and C_5- components into separation zones to produce a multi-branched paraffin (e.g., di and tri-branched paraffins) stream, mono-branched paraffin stream, and normal paraffin stream. The mono-branched paraffin stream and normal paraffin stream are then passed into an isomerization zone. Stem also teaches that the process may comprise two separated isomerization zones with the normal paraffins being isomerized in the first zone and the mono-methyl paraffins being isomerized in the second zone. The isomerization process is operated at temperatures ranging from 200° to 400° C and pressures ranging from 10-40 bars (1 to 4 Mpa). The isomerization process is operated in the presence of hydrogen and catalyst. (See col. 3, line 55 through col. 4, line 57; col. 9, lines 14-53, and 68; column 10, lines 1-15; column 11, lines 46-68; column 12, lines 1-22; col. 17, lines 9-33; and Figures 2-7)

Stem does not specifically disclose that the multi-branched paraffin stream provides a minimum content of 2 % weight of C_7 di-branched paraffins, does not discloses that feed comprises at least 12 mole % of hydrocarbon containing at least 7 carbon atoms, does not

disclose that the whole of the effluent from the first isomerization zone traverses the second isomerization zone, does not disclose the locations and the zones as in claim 9, does not disclose distillation of step as in claim 16, and does not disclose all the isomerization conditions.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Stem by using a feed comprising the claimed amount of C_7 paraffins because Stem teaches that the feedstock can comprises quantities of C_7 paraffins (see col. 5, lines 57-62). Therefore, one of skill in the art would utilize a feedstock comprising any amount of C_7 paraffins including the claimed amount with the expectation that a feedstock comprising any amount of C_7 paraffins would be effectively processed in the process of Stem. As a result, it would be expected the product steam would comprise at least 2 wt.% of C_7 di-branched paraffins.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Stem by passing the whole effluent from the first isomerization to the second because additional conversion would be expected thereby producing more of valuable, high octane product.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified by locating the zones as in claim 9 because the process is a cyclic process and the locations of the zones would not affect the outcome of the process since the feed is ultimately passed through each zone.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Stem by distilling the feed using the claimed devise because Stem discloses that the feed should contain certain types of hydrocarbons.

Therefore, one of skill in the art would obtain a feed in any manner including the well-known technique of distillation.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Stem by utilizing the claimed isomerization conditions because one would select conditions that result in the effective isomerization of the feed.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stem et al. (4,982,048) as applied to claim 16 above, and further in view of Zinnen et al. (5,744,684).

Stem does not disclose the eluent.

Zinnen teaches that normal alkanes is effective desorbent. See col. 7, lines 8-32

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Stem by using the claimed eluent because normal alkanes are effectives as taught by Zinnen.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam M. Nguyen whose telephone number is (571) 272-1452. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tam M. Nguyen
Examiner
Art Unit 1764

TN

6/22/05